

Umeå University
Department of Computing Science

Object-Oriented Programming Methodology 7.5 p
5DV133

OU1 Clock

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Clock	NumberDisplay
# hours : NumberDisplay # minutes : NumberDisplay - displayString : String	- minLimit : int - maxLimit : int - value : int
+ timeTick() : void + setTime(int, int) : void + getTime() : String - updateDisplay() : void	+ getValue() : int + setValue(int) : void + getDisplayValue() : String + increment() : void + didWrapAround() : boolean

Figure 1: Class diagrams of *Clock* and *NumberDisplay*.

1 Introduction

Aim of this laboration was to implement a digital clock and an alarm clock in the object oriented language Java. The class design was mostly defined in the assignment. After implementing *Clock* and *Alarm* classes, a *main* method had to be written to provide test cases of the implemented classes. Additionally, it was recommended to also write JUnit tests for all classes.

2 Usage Instructions

The files provided in an zip archieve are: *ClockApp.java*, *Clock.java*, *ClockTest.java*, *NumberDisplay.java*, *NumberDisplayTest.java*, *Alarm.java*, *AlarmTest.java*. To build from the command line, *javac ClockApp.java* is invoked. To run the program *java ClockApp*.

The program does not take any input and does not produce any output. During runtime, it writes several lines to standard out. The implications of the printout will be described further in the section *testing*.

3 System Description

class diagram, Class Responsibility and Collaborators, programflow

4 Testing

5 Program Structure

6 Discussion

References